**SUPPLEMENTARY MATERIAL**

**Table S1**. Cohort characteristics in individuals with and without data available for urinary sodium excretion.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Participants with sodium excretion data | Participants without sodium excretion data available | p-value |
| **Socio-demographic** |  |  |  |
| Total, n | 2,913 | 2,380 |  |
| Age (years), mean (SD) | 46·4 (18·5) | 46·4 (18·9) | 0·908 |
| Age categories (n, %) |  |  |  |
| <25 years | 430 (14·7) | 369 (15·5) | 0·336 |
| 24-44 years | 967 (33·2) | 765 (32·1) |  |
| 45-65 years | 937 (32·2) | 806 (33·9) |  |
| >65 years | 579 (19·9) | 440 (18·5) |  |
| Sex, (n, %) |  |  |  |
| Women | 1,697 (58·3) | 1,446 (60·8) | 0·065 |
| Men | 1,216 (41·7) | 934 (39·2) |  |
| Zone (n, %) |  |  |  |
| Urban | 2,481 (85·2) | 2,026 (85·2) | 0·977 |
| Rural | 432 (14·8) | 352 (14·8) |  |
| Education (n, %) | 767 (26·4) | 641 (27·0) | 0·680 |
| Up to primary (< 8 years) | 1,581 (54·6) | 1,302 (54·9) |  |
| Up to secondary (< 12 years) | 552 (19·0) | 430 (18·1) |  |
| Beyond secondary |  |  |  |
| Income (n, %) |  |  | 0·075 |
| Low | 1,564 (55·7) | 1,267 (56·7) |  |
| Middle | 914 (32·6) | 754 (33·7) |  |
| High | 329 (11·7) | 215 (9·6) |  |
| **Anthropometric** |  |  |  |
| BMI (kg/m2), mean (SD) | 27.9 (5·4) | 27·8 (5·3) | 0·709 |
| BMI categories, n (%) |  |  | 0·147 |
| Normal weight (18·5-24·9 kg/m2) | 854 (30·1) | 538 (28·5) |  |
| Overweight (25·0-29·9 kg/m2) | 1,126 (39·7) | 803 (42·6) |  |
| Obese (≥30·0 kg/m2) | 856 (30·2) | 546 (28·9) |  |
| WC (cm), mean (SD) | 96·3 (12·3) | 96·4 (12·9) | 0·903 |
| Central Obesity, n (%) |  |  | 0·325 |
| Normal | 1,676 (57·9) | 1,096 (56·5) |  |
| Obese | 1,219 (42·1) | 845 (43·5) |  |
| **Lifestyles** |  |  |  |
| Total physical activity  (METs/h/week), mean (SD) | 121·6 (147·5) | 113·9 (140·8) | 0·057 |
| Transport physical activity(min/day), mean (SD) | 49·2 (85·6) | 48·6 (83·6) | 0·786 |
| Moderate PA (min/day), mean (SD) | 102·2 (147·5) | 105·7 (151·5) | 0·391 |
| Vigorous PA (min/day), mean (SD) | 54·5 (126·0) | 44·8 (115·8) | 0·004 |
| Physical Activity, n (%) |  |  | 0·925 |
| Active | 2,159 (76·0) | 1,764 (76·1) |  |
| Inactive | 681 (24·0) | 553 (23·9) |  |
| Sitting time (hr/day) | 3·4 (2·7) | 3·4 (2·6) | 0·312 |
| Fruit and vegetables intake (g/day), mean (SD) | 215·4 (137·8) | 214·4 (138·2) | 0·810 |
| Alcohol intake (g/day), mean (SD) | 51·2 (69·7) | 57·4 (116·2) | 0·179 |
| Smoking Status, n (%) |  |  | 0·881 |
| Never | 1,201 (41·4) | 978 (41·2) |  |
| Ex-smoker | 690 (23·7) | 578 (24·3) |  |
| Current smoker | 1,012 (34·9) | 818 (34·5) |  |
| **Health status** |  |  |  |
| Diabetes, n (%) |  |  | 0·063 |
| No | 2,520 (89·4) | 1,642 (87·3) |  |
| Yes | 300 (10·6) | 238 (12·7) |  |
| Metabolic syndrome, n (%) |  |  |  |
| No | 1,601 (64·3) | 64 (61·5) | 0·562 |
| Yes | 888 (35·7) | 40 (38·5) |  |
| Family history of hypertension, n (%) |  |  |  |
| No | 1,718 (61·3) | 1,368 (60·0) | 0·332 |
| Yes | 1,083 (38·7) | 912 (40·0) |  |
| SBP (mmHg), mean (SD) | 128·4 (22·9) | 126·2 (22·0) | 0·488 |
| DBP (mmHg), mean (SD) | 76·5 (11·4) | 75·3 (10·9) | 0·654 |

Data presented as mean and SD for continuous variables or n and % for categorical variables. Quantitative data was checked for normality using skewness and kurtosis normality tests whereas chi-square test was used for categorical variables. Sodium excretion was determined through a urine sample and was transformed into a 24-hour sodium excretion by formulae by Tanaka et al (1).

**Table S2.** Association of urinary sodium excretion with systolic, diastolic, and mean arterial blood pressure.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Systolic Blood Pressure | | Diastolic Blood Pressure | | Mean Blood Pressure | |
|  | Beta (95% CI) | p-value | Beta (95% CI) | p-value | Beta (95% CI) | p-value |
| Model 0 | 2·06 (1·7; 2·4) | <0·0001 | 0·85 (0·7; 1·0) | <0·0001 | 3·76 (3·1; 4·4) | <0·0001 |
| Model 1 | 1·42 (1·1; 1·7) | <0·0001 | 0·71 (0·5; 0·8) | <0·0001 | 2·83 (2·3; 3·4) | <0·0001 |
| Model 2 | 1·19 (0·9; 1·5) | <0·0001 | 0·41 (0·2; 0·6) | <0·0001 | 2·01 (1·4; 2·6) | <0·0001 |

Data presented as beta coefficients and their respective 95% CI per 0.4 g increment in dietary sodium intake per day. Model 0 was unadjusted, Model 1 was adjusted for age, sex, area of residency (rural, urban), city of residency, education levels and Model 2 was adjusted for Model 1 plus smoking, sedentary behaviour, total PA and BMI categories. Participants who were on BP medication were removed from the analysis (n= 694).

**Table S3.** Odds ratio associations between sodium excretion and hypertension.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Model 0 | Model 1 | Model 2 |
| Sodium Excretion (g/day) | OR (95% CI) | OR (95% CI) | OR (95% CI) |
| 2 | 1·16 (0·71; 1·91) | 1·06 (0·57; 1·96) | 1·07 (0·56; 2·05) |
| 2·4 | 0·98 (0·77; 1·25) | 0·97 (0·71; 1·31) | 0·98 (0·72; 1·35) |
| 2·8 | 0·94 (0·83; 1·07) | 0·98 (0·84; 1·14) | 0·99 (0·85; 1·16) |
| 3·2 | 1·00 (1·00; 1·00) | 1·00 (1·00; 1·00) | 1·00 (1·00; 1·00) |
| 3·6 | 1·21 (1·01; 1·45) | 1·11 (0·89; 1·38) | 1·07 (0·85; 1·34) |
| 4·0 | 1·61 (1·28; 2·02) | 1·51 (1·14; 1·99) | 1·32 (0·99; 1·76) |
| 4·4 | 1·79 (1·43; 2·23) | 1·80 (1·37; 2·36) | 1·55 (1·17; 2·06) |
| 4·8 | 1·86 (1·47; 2·37) | 1·98 (1·48; 2·66) | 1·70 (1·25; 2·31) |
| 5·2 | 2·15 (1·65: 2·81) | 2·33 (1·68; 3·24) | 1·83 (1·29; 2·59) |
| 5·6 | 2·62 (1·83; 3·76) | 2·84 (1·82; 4·44) | 2·05 (1·27; 3·30) |
| 6·0 | 2·80 (1·91; 4·12) | 2·64 (1·60; 4·34) | 2·24 (1·22; 4·11) |

Data presented as odds ratio and their 95% CI derived from non-linear analysis using spline logistic regression with 4 knots (20th, 40th, 60th and 80th percentiles). Analyses were adjusted for age, sex, area of residency (rural, urban), city of residency, education levels, treatment for BP, smoking, sedentary behaviour, total PA and BMI categories.

**Reference**

1. Tanaka T, Okamura T, Miura K *et al.* (2002) A simple method to estimate populational 24-h urinary sodium and potassium excretion using a casual urine specimen. *Journal of human hypertension* **16**, 97-103.